

April 12, 2002

Mr. Melvin Spaulding
Consolidated Grain and Barge Company
P.O. Box 547
Mt. Vernon, Indiana 47620

Re: 129-15392
First Minor Source Modification to
Part 70 No.: T129-10111-00035

Dear Mr. Spaulding:

Consolidated Grain and Barge Company was issued a Part 70 permit, T129-10111-00035 on February 20, 2001 for a soybean oil extraction plant. An application to modify the source was received on March 19, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (a) One (1) new silo, with a maximum capacity of 525,000 bushels, and a maximum handling rate of 157,500 tons per year, using oil application to control PM emissions. The new silo will not increase the overall throughput of the soybeans at the plant, but will allow the source to separate genetically altered crops from non-genetically altered ones.
- (b) One (1) new enclosed belt conveyor to load the new silo.
- (c) One (1) new enclosed drag conveyor to loadout the new silo.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

- (a) The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
- (b) This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- (c) Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
- (d) Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

- (e) All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
- (f) Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The source may begin construction and operation when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Aida De Guzman or extension (3-4972), or dial (317) 233-4972.

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

APD

cc: File - Posey County
Posey County Health Department
Southwest Regional Office
Air Compliance Section Inspector - Scott Anslinger
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 MINOR SOURCE MODIFICATION OFFICE OF AIR QUALITY

**Consolidated Grain and Barge Company
Bluff Road
Mt. Vernon, Indiana 47620**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

First Minor Source Modification No.: 129-15392-00035	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 12, 2002

SECTION D.1 FACILITY OPERATION CONDITIONS

SECTION D.1 (cont.)

- (www) Four (4) fixed roof soybean oil storage tanks with a maximum storage capacity of 932 cubic meters each;
- (xxx) Three (3) fixed roof soybean oil storage day tanks with a maximum storage capacity of 114 cubic meters each; and
- (yyy) One (1) fixed roof dust suppression soybean/mineral oil storage tank with a maximum storage capacity of 1,000 gallons.
- (zzz) Two (2) soybean storage piles, each with a maximum annual throughput of 0.75 million bushels per year.
- (aaaa) One (1) new silo, with a maximum capacity of 525,000 bushels, and a maximum handling rate of 157,500 tons per year, using oil application to control PM emissions. The new silo will not increase the overall throughput of the soybeans at the plant, but will allow the source to separate genetically altered crops from non-genetically altered ones.
- (bbbb) One (1) new enclosed belt conveyor to load the new silo.
- (cccc) One (1) new enclosed drag conveyor to loadout the new silo.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions).

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the affected facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart DD.

D.1.2 New Source Performance Standards(NSPS) Grain Elevators [326 IAC 12] [40 CFR Subpart DD 60.302(b)]

Pursuant to 40 CFR Subpart DD 60.302(b), process emission gases discharged into the atmosphere from the:

- (a) north truck only receiving pit; north house bin loading area elevator and conveyors; north storage/loadout area conveyors;
- (b) receiving area P1 truck only receiving pit, belt conveyor system, aspirated receiving leg, drag conveyor and covered belt conveyor;
- (c) receiving area P2 hopper bottom truck and rail receiving pits, drag conveyors and aspirated receiving legs;
- (d) barge receiving area clamshell crane or bucket unloading, aspirated hopper, belt/mass flow conveyors, conveyor system and bucket elevators;
- (e) drag conveyors comprising two conveyance systems between the storage silos and elevator legs; elevator legs; conveyor between the elevator legs and magnet;
- (f) cleaning system cleaner, aspirators, hoppers, and scale; and

- (g) L-Path drag conveyor; drag conveyor to the jet dryers;
- (h) one (1) new enclosed belt conveyor to load the new silo.
- (i) one (1) new enclosed drag conveyor to loadout the new silo.

shall not exceed particulate matter (PM) concentrations of 0.01 gr/dscf. Process emission gases from these facilities shall not exhibit greater than 0 percent opacity.

D.1.5 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2, the PM from the:

Truck Receiving and Conveyors (P1), Rail/Hopper Bed Truck Receiving (P2), North Truck Receiving and Conveyors, Barge Grain Receiving (P16), Annex Silo Loading (P2A), Merchandising Silo Loading (P26), North House Bin Loading, North House Storage Loadout, Soybean Cleaning (P4), Soybean Heater (P21), Soybean Cracking/Dehulling (P5), Soybean Expander (P23), Soybean Flaking (P19), DTDC Meal Drying (P10 & P11), DTDC Meal Cooling (P12), Meal Sizing (P9), Kaolin Handling (P3), Hull Grinding (P6), Hull Storage Loading (P7), Hull Storage Unloading (P7), Hull Pellet Cooling (P8), Hull Pellet Storage (P8), Meal Storage & Loadout Bins (P20), Truck Meal Loadout (P14), and Barge/Rail Meal Loadout (P15), Two (2) 0.75 million bushels per year soybean storage piles, one (1) new enclosed belt conveyor to load the new silo, one (1) new enclosed drag conveyor to loadout the new silo.

shall not exceed the pound per hour emission rate established as E in one of the following applicable formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

-- or --

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.7 Best Available Control Technology (BACT) [326 IAC 8-1-6]

Pursuant to CP-129-7488-00035 (issued on July 17, 1995), as revised by source modification (129-12235-00035), the VOC (hexane) emissions from the soybean oil extractor plant shall comply with the Best Available Control Technology (BACT) for the oil extractor, meal dryers, and meal cooler. The company shall assure compliance with BACT by performing monitoring and recordkeeping such that the following limits are not exceeded:

- (a) the hexane usage shall be limited to 0.225 gallons per ton of soybean crushed, and
- (b) the total amount of soybeans processed at the plant shall meet the limit established in Condition D.1.4.

The limits established correspond to the following BACT determinations:

- (a) Leg, Truck Loadout, Rail Loadout, and Barge Loadout shall be in operation at all times those facilities are in operation.

- (b) The cyclones for the Cleaning System, Jet Dryers, CCD Dryers, CCC Coolers, Cracking and Dehulling, Hull Screening/Aspiration, Hull Pellet Cooler, DTDC Dryers, DTDC Cooler shall operate at all times when those facilities are in operation.
- (c) Dust control oil shall be applied at all times that the new Belt Conveyor and new Drag Conveyor for the new Silo, Conveyors/Legs, Storage Silos, Magnet, Cleaning system and loading/unloading operations listed as utilizing said control are in operation. Oil application shall be at a rate determined appropriate based on PM compliance tests.
- (d) The H.B. Truck and Rail receiving pits shall be limited to hopper bottom rail cars and trucks with choke unloading. Unloading at these receiving pits shall be conducted inside a two-sided and roofed enclosure to minimize fugitive emissions. Guidelines shall be posted in this area which address these operational limitations.
- (e) Emissions shall be minimized in all receiving, handling, and shipping operations by appropriate methods. These may include, but may not be limited to: dust collection systems, windscreens, baffles, restricted hopper openings, enclosed transfer points, and flexible drop spouts and/or sleeves.
- (f) Good housekeeping and equipment maintenance procedures shall be implemented.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification

Source Background and Description

Source Name:	Consolidated Grain and Barge Company		
Source Location:	Bluff Road, Mount Vernon, Indiana 47620		
County:	Posey		
SIC Code:	2057		
Operation Permit No.:	T 129-10111-00035	Issuance Date:	February 20, 2001
Minor Source Modification:	129-15392		
Permit Reviewer:	Aida De Guzman		

The Office of Air Quality (OAQ) has reviewed a modification application from Consolidated Grain and Barge Company, a soybean oil extraction plant relating to the construction of the following emission units:

- (a) One (1) new silo, with a maximum capacity of 525,000 bushels, and a maximum handling rate of 157,500 tons per year, using oil application to control PM emissions. The new silo will not increase the overall throughput of the soybeans at the plant, but will allow the source to separate genetically altered crops from non-genetically altered ones.
- (b) One (1) new enclosed belt conveyor to load the new silo.
- (c) One (1) new enclosed drag conveyor to loadout the new silo.

History

On March 19, 2002, Consolidated Grain and Barge Company submitted an application to the OAQ requesting to add the above emission units to their existing plant. Consolidated Grain and Barge Company was issued a Part 70 permit on February 20, 2001.

The source has been limited to its annual soybean production to avoid Prevention of Significant Deterioration (PSD).

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 19, 2002.

Emission Calculations

(a) New Silo and Conveyors:

Capacity	-	525,000 bushels
Number of turnovers per year	-	10
Maximum Loading Rate	=	525,000 bushels * 10/yr * 60 lb/bushel * ton/2000 lb
	=	157,500 tons/yr
Mineral Oil Control Efficiency	=	90%

Process	Loading Rate (tons/yr)	Emission Factor (lb/ton)		Uncontrolled Emissions (Tons/yr)		Controlled Emissions (tons/yr)	
		PM	PM10	PM	PM10	PM	PM10
Silo Loading	157,500	0.03	0.015	2.4	1.18	0.24	0.118
Silo Loadout	157,500	0.086	0.029	6.8	2.28	0.68	0.228
TOTAL				9.2	3.46	0.92	0.346

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	9.2
PM-10	3.46
SO ₂	0.0
VOC	0.0
CO	0.0
NO _x	0.0

Justification for Modification

The installation of the new emission units qualifies as a Minor Source Modification, pursuant to 326 IAC 2-7-10.5(d)(4) and (6), since the modification has the potential to emit (PTE) of greater than 5 tons per year but less than 25 tons per year of PM or PM10, and the modification is subject to the New Source Performance Standards (NSPS).

County Attainment Status

The source is located in Posey County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	not determined

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Posey County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Posey County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD Definition (emissions based on the latest permit (AA129-14511-00035, issued to the source, on February 5, 2001):

Pollutant	Emissions (tons/year)
PM	196.5
PM-10	163.1
SO ₂	0.3
VOC	206.9
CO	37.2
NOx	44.2

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Silo Loading	0.24	0.118	0.0	0.0	0.0	0.0	0.0
Silo Loadout	0.68	0.228	0.0	0.0	0.0	0.0	0.0
Modification Total Emissions	0.92	0.346	0.0	0.0	0.0	0.0	0.0
PSD Threshold Level	250	250	250	250	250	250	-

Existing Source PTE	196.6	163.1	0.3	206.9	37.2	44.2	-
Source PTE After Issuance of the Modification	197.52	163.446	0.3	206.9	37.2	44.2	-

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

(a) New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60)

- (1) 40 CFR Part 60.300, Subpart DD - Standards of Performance for Grain Elevators. This NSPS applies to each of the following facilities located at a grain terminal elevator or any grain storage elevator with a permanent grain storage capacity of 1 million bushels: truck loading and unloading stations, barge and ship loading unloading stations, railcar loading and unloading stations, grain dryer, and all grain handling operations, in which commences construction, modification, or reconstruction after August 3, 1978. Grain handling operations is defined to include bucket elevators or legs (excluding legs used to unload barges or ships), scale hoppers and surge bins (garners), turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures.

The source has already been determined to be subject to the NSPS, and the following new facilities are in addition to the existing facilities already been subject to this NSPS: the new grain silo, belt conveyor and drag conveyor, since they are part of the "other such structures" defined under the grain handling operations. Pursuant to Part 60.302(b)(1)(2), the owner or operator of these new process emission units shall not discharge any Particulate Matter (PM) concentrations in excess of 0.01 grain per dry standard cubic feet (gr/dscf) emissions, nor emit gases greater than zero percent (0%) opacity.

- (2) There are no other NSPS applicable to this modification.

(b) National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR Part 63).

- (1) There are no NESHAPs applicable to this modification.

State Rule Applicability

- (a) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (b) 326 IAC 6-3-2 (Process Operations)
326 IAC 6-3-2 is applicable to the new silo, belt conveyor and drag conveyor which mandates a PM emission limits from these new equipment using the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The sources uses oil application to control the PM emissions, and thus complying with this limit.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached **Part 70 Minor Source Modification No. 129-15392-00035.**